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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 3, 2012

TO: Internal File

THRU: Steve Christensen, Team Lead. *S/C*

FROM: Priscilla Burton, Environmental Scientist III/Soils. *PB km 805*

RE: East Mountain Emergency Drill Holes – Phase I Bond Release, Genwal Resources, Inc., Crandall Canyon Mine, C/015/0032, Task ID #4209

SUMMARY:

The information received on November 27, 2012 Plate 1-1, Map #1 and pages 2, 8, and 10 were revised to adequately respond to the deficiencies noted in Task 4193, the bond release application, dated September 14, 2012.

The Permittee requests Phase I bond release on 11.98 acres of land on East Mountain (T. 15 S., R. 6 E. portions within Section 35 and in T 16 S. R 6 E. portions of Section 2 and 11). The application is provided as Attachment 18 to be added to Appendix 5-22A of the MRP. The area includes land that was backfilled and seeded outlined on Map #1 and road shown on SITLA and USFS land on Map #2. A Phase I bond release inspection was made on October 10, 2012, accordance with R645-301-880.100.

TECHNICAL ANALYSIS:

The site is located in R. 6 E., T 15 S. Sec. 35 and T. 16 S. Sections 11 and 2, within the Manti LaSal forest on USFS surface (Sec 35 and 11) and SITLA owned surface (Sec. 2). Refer to MRP Plate 1-1 which shows the disturbance location, Township and Range and lease location.

East Mountain ridge is over 10,000 ft. along its seven mile length. It divides the watershed between Cottonwood Creek and Huntington Creek. The Crandall Mine is situated on the east side of the East Mountain ridge on Crandall Creek, a perennial creek with headwaters on the east side of East Mountain. The temporary road access to the reclaimed drill pads left

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National Forest System Road #50244 and followed the East Mountain ridge for 2,573 ft across USFS managed land and across 11,044 ft of SITLA managed land. The access road then drops off the ridge to the west. Six reclaimed drill pads (7 drilling locations) are on the west side of East Mountain. In addition Map #2 shows two reclaimed spurs on the ridge access road. One was used for water truck parking and one was the location of shot holes made to attempt communication with the miners.

The east side of East Mountain ridge is open meadow. The west side of the East Mountain ridge is pine forest and low brush. Slopes on either side of the ridge are steep. In the reclaimed drill pad locations, slopes average 40% (USGS 7.5 min Rilda Quad map), but the reclaimed slopes were noted to be 63% and 350 ft long by a SITLA representative familiar with the site (Insp. Rpt #2093).

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The requirements for Phase I bond release are outlined in R645-301-880.310.

The disturbed acreage to receive bond release is 11.98 acres as reported on page 1-10 of Chapter 1 of the MRP. No topsoil was salvaged during the emergency.

In 2007, the fill was replaced at drill locations #3, #4, #5, and #7, using trackhoes and dozers and compacting the soil in 18 -24 inch lifts. The re-graded soil was seeded with the final mix (Attachment 7 of App. 5-22(a)) and mulched with wood straw [Attach 8 of App. 5-22(a)]. Pads #3, #4, #5, #7 and a re-routed segment of the SITLA road were reclaimed in 2007 immediately after disturbance (App 5-22(a)(1)). Inspection reports #1427, #1432, #1441, #1454, #1459 follow the progress of the 2007 work.

In 2008, pads #2 and #6 and the access road off the west side of the East Mountain ridge were reclaimed using track hoes, dozer and rock trucks (as described on page 7 of the application). A French drain was retained across the reclaimed access road in a location of a seep halfway between reclaimed drill pad #6 and #4. Excelsior logs were placed across the slope in a topographically low point across the access road just east of pad#6. Excelsior logs were maintained along the temporary access road across East Mountain ridge. Inspection reports #1716, #1771, #1757, #1733, #1727 follow the progress of the 2008 work. The Permittee did

not provide as built surveys, maps or geotechnical analysis for the SITLA road as described in Appendix 5-22(a)

In 2010, a site visit with all agencies present (USFS, SITLA, DOGM) confirmed that the reclamation of the drill sites was stable and the temporary access road could now be reclaimed (Inspection Report #2093). Sediment controls were maintained along the access road, but reclamation work was not completed in 2010. Inspection reports #2070, #2093, #2175, #2405 follow the site in 2010.

In the Spring 2011, a slide below pad #6, across the reclaimed access road was observed. (The location of the slide is indicated on Map #1 provided with the application.) Excelsior logs were placed at the head of the slide in the fall of 2011 and the temporary access road along the East Mountain ridge was reclaimed and French drains were removed all the way back to its intersection with Forest Rd #244 in the fall of 2011. (As built mapping described on page 12 of App 5-22(a) was not completed.) The reclaimed roadway was pocked and seeded, but there was no time to spread wood straw before snowfall made the site inaccessible. Inspection reports #2842, #2883, #2905 follow the progress of the 2011 work.

In August 2012, the slide area (identified as the excelsior log area on Map #1) was further stabilized (as described on page 10 of the application), thistle was manually controlled on the reclaimed slope of Pad #2 and Pad #6, subsidence cracks (first noted in 2002) were filled on the east mountain ridge, the hiking trail was completed across the ridge to connect with the existing trail #085 on either end of the disturbance, the re-affected portion of the road was pocked and reseeded, and wood straw was scattered. The access gate was replaced with boulders and the parking area was roughened and reseeded. Inspection reports #3148, #3169, #3194, #3210, #3224, and #3227 follow the progress of the 2012 work.

Findings:

The information meets the requirements of bond release.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Reclamation treatments included surface roughening by gouging and a surface application of wood straw. Seed and wood straw were hand distributed.

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Findings:

The Permittee has adequately applied best management practices to control erosion and prevent sediments from leaving the site.

RECOMMENDATIONS:

Approval is recommended.